

Response to Amendment

1. This action is in response to the communications and remarks filed on 02 July 2009.

Claims 1-27 are presently pending for examination.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 7-8, 10-13, 15-19, 21-23 and 27-41 have been considered but are moot in view of the new ground(s) of rejection.

It is the Examiner's position that the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique. It is advised that, in order to further expedite the prosecution of the application in response to this action, Applicant should amend the base claims to describe in more narrow detail the true distinguishing features of Applicant's claim invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 7-8, 10-13, 15-19, 21-23 and 27-41 are rejected under 35 U.S.C.

103(a) as being unpatentable over Chantrain et al. (Chantrain), U. S. Patent Application

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Publication No. 2002/0194323 in view of Natarajan et al. (Natarajan), U. S. Patent No. 6584502 and further in view of Tindal, U. S. Patent No. 6978301.

Regarding claim 1, Chantrain discloses a method implemented on one or more computing devices (see e.g. paragraph [0015], configuration change implement in one or more network elements), comprising: receiving from a computing device operated by a customer of network services from an operator of one or more packet routed networks a service request for adding, modifying or canceling a packet transport service on the one or more packet routed networks having defined service levels on the one or more packet networks (see e.g. paragraphs [0018], [0020] and [0050]; a request for configuring a network element is received by the network element controller); and automatically generating, in response to receiving the service request, updated configuration data for one or more of a plurality of network elements of said one or more packet networks necessary for implementing the service request (see e.g. paragraphs [0039] and [0051]-[0054]; current configuration database is accessed and template of configuration service change is generated).

Although Chantrain discloses the invention substantially as claimed, it does not explicitly disclose updating configurations of the one or more network elements according to the updated configuration data.

Natarajan, however, teaches a technique for providing automatic event notification of changing conditions to a network element wherein the affected network elements are updated and the configuration updates are stored in a database cache (see e.g. fig. 10 and col. 13 lines 59-66 and col. 18 lines 42-59). At the time of the invention it would

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have been obvious to a person of ordinary skill in the art to combine the teachings of Natarajan with that of Chantrain. Motivation for doing so would have been to have the configuration data available for use by the network element in the event of an error (see Natarajan, col. 9 lines 11-17).

Although Chantrain-Natarajan disclose the invention substantially as claimed, they do not disclose wherein automatically generating the updated configuration comprises, for each of the one or more network elements affected by the service request, selecting one or more scripts from a plurality of predefined scripts based at least in part on the type of device and its vendor; and populating a configuration template that is specific to the network element with configuration data from a network database according to the one or more scripts, the network database storing information about each of the one or more network elements affected by the service request according to a vendor-independent schema.

Tindal teaches a system for configuring network devices wherein the configuration of network devices are done by automatically populating configuration templates with vendor-specific information selected from repository directory that contains predefined data structure for vendor based network devices and as a result, the configuration modification are automatically generated (see Tindal, col. 4 lines 9-29 and col. 5 lines 40-67). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Tindal with that of Chantrain-Natarajan. Motivation for doing so would have been to provide an efficient way of configuring network devices without regard to the device type and/or manufacturer thus reducing

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the burden on network administrator (see Tindal, col. 3 lines 29-31 and lines 60-64).

Regarding claim 7, Chantrain-Natarajan-Tindal teaches further comprising verifying that said new configuration data is consistent with a configuration of said one or more packet networks (see e.g. Natarajan, fig. 13 item 1306 and col. 33 lines 10-27). The same motivation utilized in the combination of claim 1, equally applies as well to claim 7.

Regarding claim 8, Chantrain-Natarajan-Tindal teaches further comprising updating a network database, storing configuration data for said one or more network elements with said generated updated configuration data (see e.g. Natarajan, col. 13 lines 59-66). The same motivation utilized in the combination of claim 1, equally applies as well to claim 8.

Regarding claim 10, Chantrain-Natarajan-Tindal teaches further comprising verifying that said updated configuration of said one or more network elements is consistent with configuration data, for said one or more network elements, stored in a network database (see e.g. Natarajan, fig. 13 and col. 33 lines 10-27). The same motivation utilized in the combination of claim 1, equally applies as well to claim 10.

Regarding claim 11, Chantrain-Natarajan-Tindal teaches wherein said verifying step comprises: retrieving said stored configuration data regarding said one or more network elements from said network database; identifying one or more fields in said updated

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configuration of said one or more network elements; and comparing values of said one or more identified fields with values of corresponding fields in said retrieved configuration data (see e.g. Natarajan, fig. 15 and col. 26 lines 11-39). The same motivation utilized in the combination of claim 1, equally applies as well to claim 11.

Regarding claim 12, Chantrain-Natarajan-Tindal teaches further comprising generating an exception in response to said values of said one or more identified fields not matching said values of corresponding fields in said retrieved configuration data (see e.g. Natarajan col. 26 lines 35-48). The same motivation utilized in the combination of claim 1, equally applies as well to claim 12.

Claim 13 list all the same elements of claim 1, but in computer-implement form rather than method form. Therefore, the supporting rationale of the rejection to claim 1 applies equally as well to claim 13. The same motivation utilized in the combination of claim 1, equally applies as well to claim 13.

Regarding claim 15, Chantrain-Natarajan-Tindal teaches further comprising obtaining abstract connectivity information for each of said one or more affected network elements from said network database (see e.g. Chantrain, paragraph [0080]).

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Regarding claim 16, Chantrain-Natarajan-Tindal teaches wherein said abstract connectivity information specifies a manner of connection between said one or more affected network elements (see e.g. Chantrain, paragraphs [0052] and [0080]).

Regarding claim 17, Chantrain-Natarajan-Tindal teaches wherein said automatically generating configuration data further comprises: selecting said one or more of said plurality of template fragments; and assembling said selected template fragments into a template (see e.g. Chantrain, paragraphs [0056] and [0058] and Tindal col. 4 lines 9-29).

Regarding claim 18, Chantrain-Natarajan-Tindal teaches further comprising populating said assembled template with said network element inventory data (see e.g. Natarajan col. 13 lines 59-66 and Tindal col. 4 lines 9-29). The same motivation utilized in the combination of claim 1, equally applies as well to claim 18.).

Regarding claim 19, Chantrain-Natarajan-Tindal teaches, further comprising communicating said configuration data to each of said one or more affected network elements (see e.g. Chantrain, paragraph [0054]).

Claim 21 list all the same elements of claim 1, but in computer-implement form rather than method form. Therefore, the supporting rationale of the rejection to claim 1 applies

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equally as well to claim 21. The same motivation utilized in the combination of claim 1, equally applies as well to claim 21.

Regarding claim 22, Chantrain-Natarajan-Tindal teaches wherein the method further comprises automatically determining which of the plurality of network elements will be affected by the service request (see e.g. Chantrain, paragraph [0051]).

Regarding claim 23, Chantrain-Natarajan-Tindal teaches wherein automatically generating updated configuration data includes generating confirmation data based at least in part on data from a network database storing current configuration data for said one or more network elements (see e.g. Chantrain, paragraphs [0052]-[0054]).

Regarding claim 27, Chantrain-Natarajan-Tindal teaches computer readable storage medium comprising: stored metadata for describing elements of a packet routed network, relationships between the elements of the packet network, and types of properties to be stored with respect to each element of the packet routed network; and fields defined by the metadata for storing configuration data (see e.g. Natarajan, col. 31 lines 35-50). The same motivation utilized in the combination of claim 1, equally applies as well to claim 27.

Regarding claim 28, Chantrain-Natarajan-Tindal teaches further comprising getting abstract connectivity/relationship information for the network element from a model of

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the one or more packet networks (see e.g. Chantrain, paragraphs [0052] and [0080]).

Regarding claim 29, Chantrain-Natarajan-Tindal teaches wherein abstract connectivity/relationship information for the network element from a model is described using meta data stored in the network database, the meta describing the configuration data stored by the network database (see Chantrain, paragraphs [0052] and [0080] and Tindal col. 7 lines 30-57).

Regarding claim 30, Chantrain-Natarajan-Tindal teaches wherein each of the plurality of predefined scripts are device and vendor-specific (see Tindal, col. 9 lines 6-13).

Regarding claim 31, Chantrain-Natarajan-Tindal teaches wherein automatically generating the updated configuration further comprises, for each of the one or more network elements affected by the service request, executing the one or more scripts in order to select a plurality of template fragments from a library of predefined template fragments for assembly into the configuration template (see Tindal, col. 4 lines 9-29 and col. 5 lines 40-67).

Regarding claim 32, Chantrain-Natarajan-Tindal teaches further comprising storing meta data describing each type of network element included in the plurality of network elements, the network inventory database storing data on each network element according to a schema defined by the meta data description (see Tindal, col. 8 line 63-

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col. 9 line 5).

Regarding claim 33, Chantrain-Natarajan-Tindal teaches wherein the configuration template is selected from a plurality of templates based at least in part on the vendor of the network element (see Tindal, col. 10 lines 41-58).

Regarding claim 34, Chantrain-Natarajan-Tindal teaches wherein automatically generating the at least the updated configuration further comprises, for each of the one or more network elements affected by the service request, selecting a plurality of template fragments from a library of predefined template fragments for assembly into a configuration template (see Tindal, col. 5 lines 40-54).

Regarding claim 35, the limitation of this claim has already been addressed (see claim 28 above).

Regarding claim 36, the limitation of this claim has already been addressed (see claim 29 above).

Regarding claim 37, the limitation of this claim has already been addressed (see claim 30 above).

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Regarding claim 38, the limitation of this claim has already been addressed (see claim 31 above).

Regarding claim 39, the limitation of this claim has already been addressed (see claim 32 above).

Regarding claim 40, the limitation of this claim has already been addressed (see claim 33 above).

Regarding claim 41, the limitation of this claim has already been addressed (see claim 34 above).

Prior Art of Record

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to form PTO-892 (Notice of Reference Cited) for a list of relevant prior art.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMED IBRAHIM whose telephone number is (571)270-1132. The examiner can normally be reached on Monday through Friday from 7:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn, Jr. can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Mohamed Ibrahim/

Examiner, Art Unit 2444

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2444